

## ABSTRACT OF THE DISCLOSURE

A plasma etching apparatus for processing a sample disposed inside of a processing chamber by generating a plasma in the processing chamber. An antenna is disposed above the sample for radiating electromagnetic waves toward the inside of the processing chamber. A dielectric member is disposed with respect to an outer periphery of the antenna, and a member is disposed above the sample in the processing chamber and facing the sample at the outer periphery of the antenna. The sample is processed in the processing chamber while enabling control of a temperature on a surface of the member.

---